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Research reveals that eight one-hour fire safety education (FSE) sessions focused on the effects of fire, personal safety strategies, and specific prevention practices or cognitive-behavioral treatment (CBT) by a clinician in an equal number and length of sessions both were significantly more effective than two one-hour home visits from a firefighter (HVF). In the initial HVF children received information about the danger of fires and function of firefighters, reviewed fire safety materials and were asked to promise not to get involved again with unsanctioned fire-play and in the follow-up visit they received a review of specific concepts and elaboration on some prior topics.

InterventionCommunication

Connecting Juvenile Intervention Programs Across Texas

State Fire Marshal To Release New Database Program

THE STATE FIRE MARSHAL'S Office (SFMO) piloted its new Juvenile Firesetter Intervention Program Database software program during the months of April, May and June and is now gearing up to release the program statewide. Sincere appreciation is extended to intervention program members of the Austin Fire Department, Denton Fire Department, Houston Fire Department, Fort Worth Fire Department, New Braunfels Fire & Rescue, and San Antonio Fire Department, who participated in the pilot program.

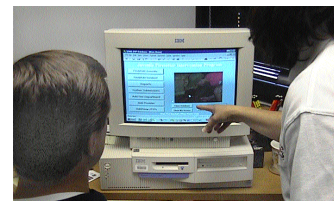
Hands-on training in the use of the new database program will be offered, free of charge, to members of Texas juvenile fire-setter intervention programs (JFIPs). Training classes will be held in Austin at the Texas Department of Insurance's (TDI) training facility on Cameron Road in August and September. (See Training box on back page.) Seating for each class is limited to 12 and will be filled on a first come, first served basis.

SFMO and TDI designed the database program to allow local JFIPs to maintain records of juveniles participating in their programs and of the fire-play and firesetting incidents in which these youths have been involved. The program permits reporting of information about the incidents and the juveniles, including items such as their types of residential environment and relationships to people exerting a significant influence on their behavior. It also allows for records of referral sources and providers of intervention services.

The program was created in Microsoft Access 97 and 2000, although departments that do not have Access will still be able to use the program through the Office Developer Kit (ODK) version.

The JFIP Database is made up of 23 forms, 19 of which are intended for the entry of data. Two of the 19 entry forms serve as search tools to facilitate retrieval of specific juvenile

and/or incident information, while another serves as a note pad that may be used for the collection of any information not captured in the forms or as each program chooses to use it. The purpose of the forms is to ensure that events surrounding juvenile-set fires and fire-play activity are recorded in a similar manner, leading to consistent and meaningful information. The database program also provides each department with the capability to run 27 different reports at the click of a button.



The information collected, both locally and statewide, will assist in setting priorities, targeting resources and populations, designing educational and outreach programs, identifying trends and perhaps providing predictors of firesetting behavior.

How do we know what we know about firesetting behavior?

...some thoughts on research design in the study of juvenile firesetting behavior

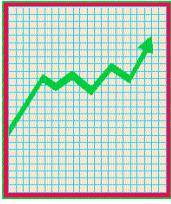
by David K. Wilcox, Ed.D.

HOW DO WE KNOW what we know about juvenile firesetting? Most of us would say we know based on our experience. But if we rely solely on our experience we encounter a number of vexing issues. How one person experiences something is different from how another person might experience an event or an incident—you have two different people with two different experiences, bringing

two different sets of past experience to how they see something. Each person has his or her own biases, their own capacity for making errors, and their current impressions are colored to some degree by their past. This makes it hard to pool our experience and make reliable claims about these children and adolescents and their behavior. What we lack in our work with these

children and adolescents is a way of gathering information that is uniform, which can translate from one program to the next, which identifies well-defined, mutually agreed upon factors that we can measure. What we lack, for all of our experience with these children and their behavior, is a systematic way of knowing about firesetting behavior that can

Continued on page 2



Without good, reliable data we cannot help these children and their families and we cannot advocate successfully for the resources we need to provide effective interventions.

How do we know what we know... continued from page 1

stand up to the demands and scrutiny of behavioral science. What we lack is good research.

Juvenile firesetting is a phenomenon that has not received the kind of attention one might expect from the behavioral sciences, especially for a behavior which can not only be lethal but which costs this country countless dollars each year. Anyone who is curious about what the behavioral sciences have offered in the way of research will find that the bibliography on this behavior is slim. Researchers have offered clinical insights and findings derived from small samples of children and adolescents, and clinicians have offered case vignettes based on single cases. David Kolko, Ph.D., at the University of Pittsburgh, has conducted the most thorough and systematic research on juvenile firesetting to date. His work has looked at large numbers of children and their families over time and identified multiple variables affecting their behavior using carefully controlled research. Dr. Kolko's Web site is <http://www.pitt.edu/~kolko/>.

But the behavioral sciences are not the only ones which have failed to systematically study this phenomenon. We do not even have good statistics on the numbers of firesetting incidents among children and adolescents. The FBI, in the *Crime in U.S. Report*, reported that 50 percent of all arrests for arson in 1997 were juveniles. What this statistic fails to point out is that many children who set fires may never be arrested. What about them? How do we account for them? Carrye Brown, Administrator with the US Fire Administration stated: "Nationally, juveniles start 225,000 fires each year. In general, arson fires kill more than 500 people and destroy some \$3 billion worth of property." These statistics only capture

incidents in which there was a fire department response to the scene—the tip of the iceberg. As many of you know from your own experience, children can engage in firesetting behavior without creating a fire that might warrant a fire department response. Our current method of accounting for fires does not capture the numerous incidents that occur where a child or adolescent sets a small fire, extinguishes it and the event goes undetected. These incidents cannot be counted for statistical purposes. We can do a better job of not only gathering data about juvenile firesetters, but also the types of fires they set.

At this point in time, we know enough about juvenile firesetting to know that we need to know more. We need to know more about the children and their families, the factors driving their behavior, and the number of firesetting incidents associated with a child or adolescent who is being screened for firesetting behavior—even if a fire department has never responded to one of these fires. We need to begin systematic studies of this behavior in order to not only understand how to provide interventions for this behavior, but also to help raise awareness about this problem. Without good, reliable data we cannot help these children and their families and we cannot advocate successfully for the resources we need to provide effective interventions.

Ironically, everyone who is out in the field working with these children and their families, trying to educate them, provide services for them, and keep them safe is in a unique position to begin broadening our understanding of this behavior using sound research techniques. Most programs, with help and guidance from someone who is knowledgeable about research, can begin investigating questions about firesetting behavior and cer-

tainly begin providing better techniques for gathering good descriptive data on these children and the fires they set.

In thinking about starting to gather data, keep it simple. Don't assume that you can answer the question of why children set fires with one research study alone. Think in terms of building your investigation, like you would build a house, from the ground up, one brick at a time. Research does not have to be complicated, but it does have to be well thought out, carefully orchestrated, and conducted with precision. Work with a team to develop what you want to study. Bring in someone who knows about designing research and turn to others in your network for ideas they have—mental health professionals, educators, social workers, and fire service professionals. Make sure the research goal you set is reasonable and will stand up to the scrutiny of good science.

- **Develop a working hypothesis about what you are going to study**—begin by raising some questions, based on your experience or what you know about juvenile firesetting (e.g., do adolescents who set fires also engage in other aggressive behavior?).
- **Determine the variable you are going to track to help answer this question**—define what you are going to try and measure, making sure that it is defined well enough so you can actually measure it (e.g., what is aggressive behavior—is it hurting someone else, destroying someone else's property, or is it using threatening language?).
- **Select a means of measuring this variable**—find a reliable means of measuring the variable you have defined, preferably by using an established questionnaire that has good reliability in the behavioral sciences (e.g., you might

use a reliable questionnaire which has been successfully used in other studies that specifically measures aggressive behavior in adolescents). If you are going to move ahead and collect data you will also need to adhere to some basic ethics about research: You need to think about confidentiality and getting the consent of your subjects. You cannot collect research data without explaining what you are doing and also giving the children and families a choice in participating in the research.

- **Collect the data**—gather the data about the variable by administering the questionnaire to the adolescents whom you see in your program.
- **Analyze your findings**—see how they reflect on your original question or hypothesis. Did your measure of aggression suggest that adolescents who set fires also engage in aggressive behavior? You might even extend the aim of your study and use a comparison group. Do the juveniles who set fires show a greater tendency for aggressive behavior than non-fire-setting juveniles who have been referred to juvenile

court for other offenses? The aim here would be to compare the two groups and how they respond on the same set of measures of aggressive behavior. Perhaps a difference will emerge; perhaps the groups will look the same. Either finding is valid if your research has been carefully designed and you have chosen reliable measures to collect your data.

Perhaps you may not be ready to launch a study at this point, but if you are seeing juvenile firesetters you are certainly in a position to collect good data on who comes to your program and what sorts of fires are being set. You might ask yourself, “does our program have a good tracking form for collecting basic demographic data on the children and adolescents we see?” What would go into a good data form? What sorts of questions would you want to ask? Could you get answers to the questions you raise? Can you come up with clear definitions of what you are trying to measure when you ask certain questions?

Undertaking research regarding juvenile firesetting may seem daunting at first. Granted, designing a study takes careful planning and a commit-

ment of time and energy. Nevertheless, it is worth our while to at least begin to raise questions we might want to investigate and think critically about this behavior and the children and families we see. Even if we cannot afford the time and resources to conduct the research studies ourselves, there may be others in our communities who can work with us in carrying out a research study. The important point is to begin to ask: How do I know what I know about juvenile firesetting, and can I begin to develop a systematic way of collecting data so that I can share my knowledge and experience with others? In the end, if we conduct solid research and begin to share data and findings with one another, we will provide better interventions for the children and adolescents we serve and they will live safer lives as a result.

David Wilcox is Clinical Coordinator, Massachusetts Coalition for Juvenile Firesetter Programs, and Clinical Instructor in Psychology, Department of Psychiatry, Harvard Medical School.

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How do I know what I know about juvenile firesetting, and can I begin to develop a systematic way of collecting data so that I can share my knowledge and experience with others?

Ask Your Colleagues...

IN AN EFFORT to promote the exchange of information and to encourage lively open communication between members of juvenile firesetter intervention programs across the state, this column will appear in each issue of **InterCom**. If you have a question you want to pose to others in the juvenile firesetting field, send it to us. We hope this forum proves to be a valuable resource to you. Submit your questions today!

Send by mail to:
JFIP/InterCom
State Fire Marshal's Office
PO Box 149221
Austin, TX 78714-9221

by e-mail to:
deborah.johnson@tdi.state.tx.us

or
jfip@tdi.state.tx.us
reference **JFIP/InterCom**

by fax to:
512-305-7359
notate subject as
JFIP/InterCom

Questions submitted are subject to edit. The information shared here is not necessarily the opinion of the State Fire Marshal's Office.



Suggestions

We welcome your comments and suggestions for future issues of **InterCom**. Please submit news, announcements, articles, comments, suggestions or resources for review to:

JFIP/InterCom, MC 112-FM
State Fire Marshal's Office
P.O. Box 149221
Austin, TX 78714-9221

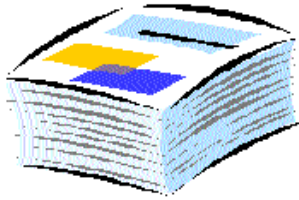
jfip@tdi.state.tx.us

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512-305-7359 Fax

University of Pittsburgh Researcher Finds Psychological and Educational Services Reduce Children's Involvement with Fire

SOURCE: University of Pittsburgh Medical Center



"Our results show that children who set fires are less likely to exhibit either firesetting or matchplay by 12-month follow-up if they receive CBT or FSE, rather than HVF."

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NEW RESEARCH from the University of Pittsburgh suggests that structured treatments designed specifically to intervene with children who set fires are more effective in the long term than a brief service in which a firefighter visits the child's home, a commonly used intervention for child fire setters.

Cognitive behavioral therapy (CBT) and fire safety education (FSE) were found to significantly curtail firesetting and matchplay behaviors up to a year after intervention. More fires were set by children who received a home visit by a firefighter (HVF) by this one-year follow-up period.

Results of the study were published in the March 2001 issue of the *Journal of Child Psychology and Psychiatry*.

"Our results show that children who set fires are less likely to exhibit either firesetting or matchplay by 12-month follow-up if they receive CBT or FSE, rather than HVF," said David J. Kolko, Ph.D., associate professor of child psychiatry, psychology and pediatrics at the University of Pittsburgh School of Medicine. "Our research shows that using these two alternative approaches can reduce the number of repeat occurrences of these behaviors."

Dr. Kolko cautioned that because children set fires for different reasons, including curiosity and behavior problems, researchers need to determine how best to apply each intervention—for example, CBT may work better for kids with behavioral problems and FSE may work better for children who are just curious about fire. Those interventions would then need to be refined to achieve the best results.

For the study, Dr. Kolko assessed a total of 70 children

who had set a recent fire. Of the 54 children who entered the study, 38 were assigned to receive either CBT or FSE and 16 received HVF. At the conclusion of the intervention period, all three interventions were associated with a marked decrease in fire-related activities.

Initially, out of 13 children who received HVF, four (28.6 percent) had set another fire by the time they had completed the intervention. Only three out of 17 children receiving CBT (17.6 percent) and two out of 13 who received FSE (14.3 percent) repeated the behavior.

During a follow-up assessment one year later, children who received CBT or FSE had been less involved with fire and had fewer other problems related to fire than children who received HVF only. According to Dr. Kolko, only 15.4 percent of children in the study who received FSE and 23.5 percent of children treated with CBT had set fires in the 12 months after treatment, whereas 50 percent of the children who received HVF had set another fire.

CBT and FSE were also better at reducing other activities associated with firesetting, such as playing with matches and being seen with matches or lighters. Whereas 57 percent of the children in a group being counseled with HVF for playing with matches repeated within a year, 35 percent of the CBT group and only 7 percent of the FSE group did. Significantly, while all three types of interventions showed at least some decrease in the number of children seen with matches or a lighter a year after treatment, none of the 12 children in the CBT group was seen with them.

"In light of this study, it is our hope that CBT and FSE can become a more integral part of the standard services avail-

able for child firesetters," said Dr. Kolko. "These results also give us a base upon which to expand our research to find out what types of alterations can be made to CBT and FSE to make those interventions more effective."

Statistics from the National Fire Prevention Association indicate that children playing with fire were responsible for more than 98,000 fires in the United States that cost 408 civilian deaths, 3,130 injuries and more than \$300.7 million in direct property damages in one year (1994). Research conducted by Dr. Kolko over the past 15 years shows that, in some cases, more than half of all child firesetters will repeat the activity over a two-year period.

Some form of home visit from a firefighter, according to Dr. Kolko, is a common method of helping child firesetters and was never meant to be a long-term service. It usually involves a firefighter going to the home of a child who has set a fire, reviewing with the child and parents some ways to avoid using fire, and handing out some educational materials. Even though this brief home visit may not have been as effective as the other two, more intensive interventions, it was associated with a significant reduction in the number of fires that were set by those children and may be a cost-effective alternative service.

Cognitive-behavioral therapy for child firesetters involves the application of psychological strategies to enhance the child's self-control, assertion, and problem-solving and parents' use of effective discipline and communication, whereas fire safety education involves training in several fire safety principles and prevention activities.

Reports Available

- A new report, ***Children and Fire in the United States: 1994-1997***, from the National Fire Data Center analyzes and discusses the incidence of fires involving children. Children playing and residential fires are highlighted. The report is not yet available in hard copy from the USFA Publications Center, but can be downloaded at www.usfa.fema.gov/nfdc/child.htm.
- ***Firefighters' Attitudes Toward Fire Prevention Activities***, a project paper (for the Strategic Analysis of Community Risk Reduction course) by one of NFA's 2000 Outstanding Research Award recipients, Marilyn R. Arnlund, Fire Marshal of Maple Grove, Minnesota, is available on line from the USFA at www.usfa.fema.gov/nfa/tr_ora.htm, or from the National Fire Academy, Executive Programs Branch, 16825 South Seton Avenue, Emmitsburg, MD 21727 (or call 800-238-3358, ext. 1639, and leave your request on voice mail).
- ***NASFM Juvenile Firesetter Intervention Project Research Reports***, a comprehensive group of studies on the problem of juvenile firesetters in the United States, are available to download at www.fire-marshals.org/issues/arson/jfip_report.html. The purpose of these studies was to formulate the basis of a strategic plan to better coordinate existing public and private resources needed to reduce the severity and incidence of fires started by children.
- The following newly revised NFPA statistical reports are now available through NFPA's One-Stop Data Shop. Most are free for the fire service.
 - Children Playing With Fire*** (June 2001)
 - School, College and University Dormitories, and Fraternity and Sorority House Fires in the United States, 1994-1998 Annual Averages**** (June 2001)
- The U.S. Fire Problem Overview Report: Leading Causes and Other Patterns and Trends*** (June 2001)
- The U.S. Smoking-Material Fire Problem*** (April 2001)
- Candle Fires**** (March 2001)
- Fireworks Related Injuries, Deaths and Fires in the U.S.**** (March 2001)
- U.S. Arson Trends and Patterns*** (March 2001)
- U.S. Fire Death Patterns by State*** (March 2001)

If you would like more information about these NFPA reports or would like to place an order, contact Nancy Schwartz at

osds@nfpa.org

or call

617-984-7450.

*Reports that can be downloaded at www.nfpa.org/research/One_Stop_Data_Shop/one_stop_data_shop.html.



Looking for Funding Ideas?

The updated ***Funding Alternatives for Fire and Emergency Services*** as well as other funding resource information can be downloaded from www.usfa.fema.gov/assist/. This manual identifies the various types of funding sources being used by fire and EMS agencies throughout the nation, and their pros and cons as well as contacts. Chapter Seven presents fundraising ideas you may not have considered and provides contact information for each idea.

Assessment Tools For Mental Health Providers

THE SFMO has had several recent requests for assessment tools from JFIPs and mental health partners of JFIPs. Robert Stadolnik, Ed.D., in his recent book, describes several of the more popular assessment tools developed for mental health practitioners. Those tools are listed below along with contact information.

Children's Firesetting Interview (CFI) and ***Firesetting Risk Interview (FRI)***, by Kolko & Kazdin (1986, 1989a, 1989b). Developed in an effort to operationalize several domains of functioning, knowledge and behaviors that were identified within a "risk factor" model for firesetting.

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FAX (203) 432-5225

The F.I.R.E. Protocol: An Assessment Instrument for Firesetting Behaviors, by Pinsonneault & Richardson (1989b). Assessment tool that includes "Firesetter Interview" and "Risk Evaluation Instrument." It is described by Pinsonneault & Richardson as a "radical departure from con-

ventional wisdom about both juvenile firesetting as a specific behavior and clinical interviewing as a general process."

Irene Pinsonneault
F.I.R.E. Solutions Inc.
P.O. Box 2888
Fall River, MA 02722
(508) 636-9149
FAX (508) 636-6063
e-mail: ilp@tiac.net

Joseph Richardson, MA, CAGS
209 Fountain Street
Providence, RI 02903
(401) 274-1150
FAX (401) 274-3625

Firesetter Analysis Worksheet, by Sakheim & Osborn (1994). For conducting a firesetting assessment and then arriving at a prediction equation. Sakheim & Osborn point out that their instrument is best used within an integrated analysis of all

clinical data and that ultimately there is no substitute for sound, clinical decisions that are based upon the findings of relevant clinical data.

George A. Sakheim, Ph.D.
and **Elizabeth Osborn, Ph.D.**
ISBN # 0-87868-579-0
Published by Child Welfare
League of America
440 First Street, NW, Ste 310
Washington, DC 20001-2085

Juvenile Firesetter Needs Assessment Protocol (JFNAP), by Humphreys & Kopet (1996). Based upon a "mental health-accountability" model that emphasizes victim impact and community safety. Designed for use by mental health professionals as an aid in documenting a juvenile's firesetting history, assessing needs, and

See **Assessment Tools** on page 6



Texas Department of Insurance
State Fire Marshal's Office
 Juvenile Firesetter Intervention Program
 P.O. Box 149221
 Austin, Texas 78714-9221

Assessment Tools... from page 5 making appropriate recommendations for intervention/treatment.

JFNAP by

J. Humphreys, ACSW, LCSW
 and **Timothy Kopet, Ph.D.**

Distributed by
 Office of State Fire Marshal
 Oregon Department of State Police, Juvenile Firesetter Intervention Program,
 4760 Portland Road NE
 Salem, Oregon 97305-1760
 503-378-3473

Qualitative Analysis Model of Child and Adult Fire Deviant Behavior, by Fineman (1995)

Based on a dynamic-behavioral model of firesetting, designed to help the forensic evaluator identify the thoughts, behaviors, and feelings that typically are associated with firesetting, it proposes a framework for the numerous factors viewed as being related to firesetting. The model includes three assessment instruments—the Firesetting Sequence Analysis Form, the Firesetting Motive Analysis Form and the Psycholegal Analysis Form.

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 17822 Beach Blvd. #437
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From **Drawn to The Flame: Assessment and Treatment of Juvenile Firesetting Behavior**

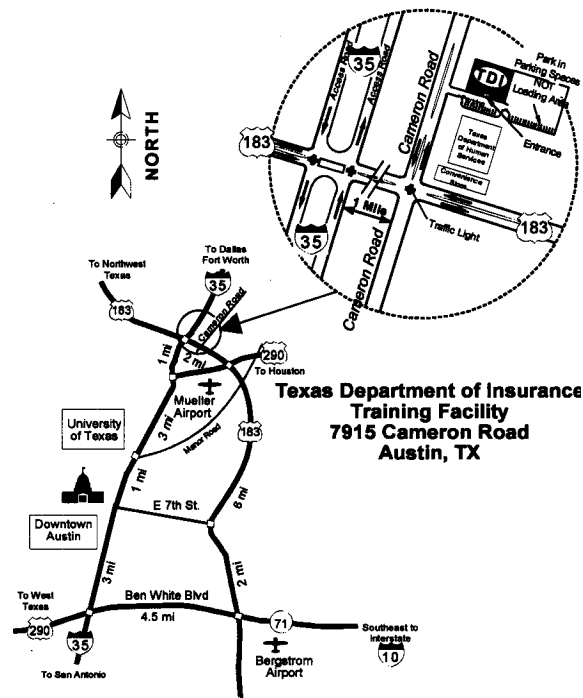
By Robert F. Stadolnik
 ISBN: 1-56887-063-9
 FirePsych, Inc.
 470 Washington St., Ste. 22
 Norwood, MA 02062
 781-762-8815
 fax 781-769-1016
 e-mail: firepsych@gis.net

Bills of Interest

The following recent legislation pertains generally to juvenile issues. Full text of the bills can be found at www.capitol.state.tx.us.

- **HB 171**—relating to the prosecution of certain offenses involving damage or destruction of property.
- **HB360**—relating to the abuse of a child.
- **HB 822**—relating to the deferral of proceedings in a justice, municipal, or juvenile court against certain persons for purposes of attending a teen court program.
- **HB 1088**—relating to the placement in an alternative education program or expulsion of a public school student who makes a false alarm or report or a terroristic threat.
- **HB1118**—relating to the adjudication and disposition of juvenile conduct and the administration of the juvenile justice system. Includes creation of a local juvenile justice information system.
- **HB1790**—relating to the requirement of notifying the parent or guardian of a child who is referred to juvenile court but who is not taken into custody.
- **HB 3473**—relating to prohibiting employer retaliation against certain employees who report child abuse or neglect.

We're on the Web!
www.tdi.state.tx.us/fire/



Free Database Training

Class held from 9 a.m. to 4 p.m. To register, call

512-305-7940
512-305-7359 fax

or e-mail deborah.johnson@tdi.state.tx.us or jfip@tdi.state.tx.us

Four class dates offered

- Tuesday, August 21, 2001
- Tuesday, September 11, 2001
- Tuesday, September 18, 2001
- Tuesday, September 25, 2001

Conference Survey

The SFMO is again considering the feasibility of sponsoring a statewide juvenile firesetter intervention programs conference for the Spring of 2002. We want to determine whether there is enough interest for this type of event. If you or members of your department would attend this proposed conference, please let us know by **August 31st**, by e-mail, fax, or letter, at:

deborah.johnson@tdi.state.tx.us
 or jfip@tdi.state.tx.us

fax **512-305-7359**

JFIP, MC 112-FM
 State Fire Marshal's Office
 P.O. Box 149221
 Austin, TX 78714-9221

Also, include any topics you would like to see offered or featured speakers you would like to hear. Thanks!